

CLAIMS

1. A method for electronic imaging, comprising:
 - forming an image comprising a background color and a non-background color on a plurality of pixels in a color mosaic image sensor;
 - receiving from each of the plurality of pixels a respective initial signal responsive to the image;
 - determining the background color of the image responsive to the initial signals;
 - determining the non-background color of the image responsive to the initial signals; and
 - calculating an adjusted signal for each pixel of the plurality of pixels responsive to the initial signal of the pixel and to at least one of the background color and the non-background color.
2. A method according to claim 1, wherein the color mosaic sensor comprises pixels of at least two specific colors, and wherein determining the background color comprises locating a background region of the image responsive to the initial signals of the pixels of at least one of the specific colors, and wherein determining the non-background color comprises locating a non-background region of the image responsive to the initial signals of the pixels of the at least one of the specific colors.
3. A method according to claim 2, wherein determining the background color comprises determining one or more background values responsive to the initial signals of the pixels of the at least two specific colors in the background region, and wherein determining the non-background color comprises determining one or more non-background values responsive to the initial signals of

the pixels of the at least two specific colors in the non-background region.

4. A method according to claim 3, wherein calculating the adjusted signal for each pixel comprises determining the adjusted signal responsive to the one or more background values and the one or more non-background values.

5. A method according to claim 1, wherein forming the image comprises forming a calibration image on the color mosaic image sensor, and wherein calculating the adjusted signal for each pixel comprises determining one or more correction factors for the sensor responsive to the calibration image and calculating a corrected value for each pixel responsive to the one or more correction factors.

6. A method according to claim 1, wherein calculating the adjusted signal for each pixel comprises calculating a plurality of sub-pixel resolution signals for each pixel responsive to a level of the initial signal of the pixel.

7. A method according to claim 6, wherein calculating the plurality of sub-pixel resolution signals comprises identifying one or more straight line segments within the image.

8. A method according to claim 1, wherein calculating the adjusted signal for each pixel comprises implementing a process of binarization of the image and utilizing the binarization to perform optical character recognition (OCR) on at least a portion of the image.

9. A method for electronic imaging, comprising:

forming an image comprising a first plurality of areas, each area comprising a respective background color

and a respective non-background color, on a second plurality of pixels in a color mosaic image sensor;

receiving from each of the second plurality of pixels a respective initial signal responsive to the image;

determining which of the second plurality of pixels correspond to each area responsive to the background color and non-background color of each area;

determining for each area the respective background color of the image responsive to the initial signals;

determining for each area the respective non-background color of the image responsive to the initial signals; and

calculating an adjusted signal for each pixel of the second plurality of pixels responsive to the initial signal of the pixel and to at least one of the first plurality of background colors and the first plurality of non-background colors.

10. Apparatus for electronic imaging, comprising:

a color mosaic image sensor comprising a plurality of pixels, which are adapted to generate respective initial signals responsive to an image formed thereon; and

a central processing unit (CPU), coupled to receive the respective initial signals from the plurality of pixels and, responsive to the initial signals, to determine a background color and a non-background color of the image and to calculate, for each of the plurality of pixels, an adjusted signal responsive to the initial signal and to at least one of the background color and the non-background color.

11. Apparatus according to claim 10, wherein the plurality of pixels comprise pixels of at least two specific colors, and wherein the CPU locates a background

region and a non-background region of the image responsive to the initial signals of the pixels of at least one of the specific colors.

12. Apparatus according to claim 11, wherein the CPU determines one or more background values responsive to the initial signals of the pixels of the at least two specific colors in the background region, and determines one or more non-background values responsive to the initial signals of the pixels of the at least two specific colors in the non-background region.

13. Apparatus according to claim 12, wherein the CPU determines the adjusted signal responsive to the one or more background values and the one or more non-background values.

14. Apparatus according to claim 10, and comprising a calibration grid which forms a calibration image on the color mosaic image sensor, and wherein the CPU determines one or more correction factors for the sensor responsive to the calibration image and calculates a corrected value for each pixel responsive to the one or more correction factors.

15. Apparatus according to claim 10, wherein the CPU calculates a plurality of sub-pixel resolution signals for each pixel responsive to a level of the initial signal of the pixel.

16. Apparatus according to claim 15, wherein the CPU determines one or more straight line segments within the image.

17. Apparatus according to claim 10, wherein the CPU implements a process of binarization of the image and utilizes the binarization to perform optical character recognition (OCR) on at least a portion of the image.

18. Apparatus for electronic imaging, comprising:

a color mosaic image sensor comprising a first plurality of pixels, which are adapted to generate respective initial signals responsive to an image, comprising a second plurality of areas, each area comprising a respective background color and a respective non-background color, formed thereon; and

a central processing unit (CPU), coupled to receive the respective initial signals from the first plurality of pixels and which is adapted, responsive to the initial signals, to determine which of the pixels correspond to each area responsive to the background color and non-background color of each area, to determine for each area a background color and a non-background color of the image, and to calculate, for each of the first plurality of pixels, an adjusted signal responsive to the initial signal and to at least one of the second plurality of background colors and the second plurality of non-background colors.